

As preliminary matters, the Applicant requests that Fig. 2A replace Fig. 1A as the figure to appear on the first page of any patent that may issue, and that the US Pat. Documents cited in paragraph 0009 of the instant application's publication (bottom of page 3 of the application as originally filed) be referenced in a References Cited section that is to appear on the front page of any patent that may issue therefrom. Of course, these amendments appear in the attached Exhibits.

Applicant also requests that the Office add an attorney docket number as follows: Newland-3D.

I. Claim Objections (numbering as follows accords with numbering as presented in the office action):

1. Applicant appreciates the Examiner's renumbering of misnumbered claim 9 to claim 10, and states that new claims numbered 15-55 are now numbered in accordance with 37 CFR 1.126.
2. Applicant has canceled claims 2, 5, 8, 10 and 12 – 14 in response (in part) to the Examiner's objection to these claims under MPEP §608.01(n) and submits that any multiply dependent claims that remain in the case are in proper form and in accordance with MPEP §608.01(n).
3. Applicant has, in response, corrected all instances of incorrectly spelled "hyperboloid", each as indicated in Exhibits A and B.

II. Claim Rejections (numbering as follows accords with numbering as presented in the office action):

5. The Examiner has expressed concern as to claims 1, 3, 4, 6, 7, 9 and 11 under 35 USC § 102(b) as based on US Pat. No. 5,642,590 issued to Skelton (hereinafter referred to as Skelton). The Examiner states that "Skelton discloses deployable tendon-controlled structure comprising four or more discontinuous compression members or struts 12a, 12b, 12c, 12d, 12e, 12f, tension members or

guys 14a, 14b, 14c, arranged in a circumferential, a radial or an internal configuration connecting the strut ends of each plane. (See figs. 1-4, 6)” (page 2 of the August 2, 2002 office action).

As a preliminary matter, Applicant respectfully explains that Skelton instead discloses subject matter that, as Skelton states, is more properly characterized as a deployable structure having six or more struts (see column 4, lines 43-46 of Skelton). Applicant further notes that Skelton discloses these struts as lying on the surfaces of three or more planes, and that Skelton discloses tendons that are arranged in a configuration other than radial or internal.

Applicant points out that original claims 1, 3, 4, 6, 7, 9 and 11 (and dependencies) have been cancelled without prejudice, but feels compelled to also indicate (in order that he not inadvertently mislead the Examiner) that of these original claims, claims 1, 3, 7, 9 and 11 (and dependencies) were cancelled not in direct response to this rejection, but primarily to present the claims in proper form and to separately claim inventive concepts that the *pro se* Applicant who filed the original claims improperly attempted to claim in one claim. However, Applicant points out that certain aspects of original claims 4 and 6 (and dependencies) *have* been cancelled without prejudice in part in response to the Examiner’s concerns. Indeed, comparison of new claims 29-34 with claims 4 and 6 (and their dependencies) will reveal that the Applicant has, in response to the office action, withdrawn from consideration in this application the following subject matter: a structure drawn to seven struts in three or more intersecting planes and having circumferential guying. However, Applicant notes that this amendment (as with all responsive amendments) is not to be construed as an admission as to the propriety of the Examiner’s concern, but merely as an expediency.

As a related matter, Applicant points out that in presenting this response, it is transferring the concerns made with respect to certain originally filed claims to the newly added claims that are most analogous to them. For instance, the Examiner expressed a 35 USC §102 concern as to originally filed claim 7, which relates to hyperbolic paraboloidal embodiments of the invention. Newly added claim 35 most closely tracks with (i.e., is most analogous to) claim 7, as newly filed claim 35 also relates to hyperbolic paraboloidal embodiments of the invention. Thus, instead of addressing the

Examiner's §102 concern expressed as to claim 7 (which has been cancelled herein), the Applicant has addressed the concern as to claim 7 as if it were expressed as to new claim 35. Because the concerns expressed as to the originally presented claims are "transferred" to the new claims, Applicant requests that the relevant new claims not generate a certain rejection, instead of requesting that a certain rejection of a new claim be withdrawn. Further, Applicant points out that such "parallel referencing" should not be construed as an admission or statement that the claims that the Applicant considers analogous have equal or similar scope or breadth.

Applicant also notes that the office action of August 2, 2002 states that "Skelton does not specifically teach the particular arrangement for each configuration." (page 3, paragraph #7 of the office action). Applicant respectfully requests clarification of the Office's reasoning in advancing the 35 USC §102 rejections, as this referenced statement appears to indicate that the Office is of the opinion that Applicant's claims are not anticipated.

Applicant also points out that, as the spatial positioning of certain structural elements of the new claims of the instant application – e.g., the positioning of compression members on the surfaces of two hyperbolic paraboloids – is a limit of the new claims, for prior art to anticipate (or render obvious) these new claims, the prior art must disclose (or in the case of obviousness, teach or suggest) this "configuration" limit, even though this "configuration" limit might not, by itself, involve the addition of new structural components.

Hyperboloidal Compression Member Configuration Embodiment of the Invention:

Applicant notes that, of the claims remaining in the case, independent claims 15, 20, 24 and 49 (and the claims that depend from them) are limited in that the compression members are arranged on the surface(s) of one (or two, as in claim 49) hyperboloids. Simply, Applicant explains that Skelton does not disclose, teach or suggest struts arranged along the surface of a hyperboloid(s). Respectfully, in order to educate the Examiner in this geometrically advanced aspect of the field of three-dimensional structures, Applicant explains that a straight bar that is appropriately inclined against the outer side of an appropriately shaped nuclear power generation plant cooling tower (a

well known shape that is often substantially hyperboloidal) so that substantially all points along a continuous portion of the straight bar's length (or along the entire length) contact the outer surface of the tower might be said to be situated on the surface of a hyperboloid of revolution of one sheet. Skelton does not disclose a hyperbolic arrangement of struts. Applicant cites this as but one reason why new claims 15, 20, 24 and 49 (and the claims that depend from them) should not generate new 35 USC §102 concerns over the Skelton reference.

Radial and Internal Tension Member Configuration Embodiment of the Invention: Applicant also notes that, of the claims remaining in the case, independent claims 20, 24, 29, 30, 47 and 48 (and the claims that depend from them) are novel in that, as but one reason, they are limited to structures having tension members arranged in either a radial or an internal configuration. Applicant notes that Skelton does not disclose, teach or suggest a radial tension member configuration, nor does it disclose an internal tension member configuration, as defined in the instant application. The configuration of the tendons 14 of Skelton is mutually exclusive of and entirely different from radial and internal configurations disclosed in the instant application (see paragraphs no. 0005, no. 0017, and no. 0038 of the instant application's publication, which, respectively, are the following paragraphs of the application as originally filed: page 2, second full paragraph; page 4, third full paragraph; page 9, second full paragraph) and appearing in several of the applications originally filed claims (see, e.g., claims 1-3). What might be helpful to the Examiner's understanding of the differences between Skelton's tendon configuration and a radial tension member configuration, and between Skelton's tendon configuration and an internal tension member configuration is reference to Fig. 1A (circumferential tension member configuration), Fig. 2A (radial configuration), and Fig. 2B (internal configuration) of the instant application. These figures give a simple, easy-to-understand diagrammatic illustration of the differences among these three different types of guying. The Applicant submits that upon the Examiner's comparison of the arrangement of tendons 14 of any of the Skelton's Figs. 1-6 with the internal or radial arrangement of tension members of the instant application (see, e.g., Fig. 2A, 2C, 2D, 3A and 6C (radial arrangement); and Fig. 2B, 3B and 4A (internal arrangement)), it will become apparent that, indeed, Skelton does not disclose an internal tension member configuration, and Skelton does not disclose an internal tension member

configuration, each of which is a limit in more than one of newly added independent claims 20, 24, 29, 30, 47 and 48 of the instant application. Indeed, Skelton appears to more closely disclose a circumferential configuration. Applicant appreciates the opportunity to educate the Examiner in the field of three-dimensional structures and requests that the Examiner not advance novelty concerns as to new claims 20, 24, 29, 30, 47 and 48 (and the claims that depend from them).

Planar Compression Member Configuration Embodiments of the Invention: Applicant explains that new claims 29, 30 and 31 (and their dependencies) – claims that specifically cover the planar arrangements of compression members – should also not generate a 35 USC §102 rejection because, as but one reason, claims 29 and 30 are limited by radial or internal guying, neither of which is disclosed, taught or suggested in Skelton, and claim 31 (and its dependencies) has compression members in only two planes, whereas Skelton, as mentioned, discloses struts in three or more planes.

Hyperbolic Paraboloid Compression Member Configuration Embodiments of the Invention: Applicant explains that new claims 35-38 are novel with respect to Skelton in that, as but one reason, these claims are limited to structures that include compression members situated on the surfaces of two hyperbolic paraboloids. Skelton does not disclose, teach or suggest such a configuration, as Skelton's struts simply are not configured in such a manner. Claims 39-42 thus are not anticipated by Skelton and should not generate a §102 concern that is based on Skelton.

Radial Compression Member Configuration Embodiments of the Invention: Applicant explains that new claims 39-42 are novel with respect to Skelton in that, as but one reason, these claims are limited to structures that include compression members having ends that contact at a common spatial point and from which they radiate outwardly. Skelton simply does not disclose, teach or suggest such an arrangement of compression members and, therefore, new claims 35-38 should not generate a §102 concern that is based on Skelton.

Polygonal Compression Member Configuration Embodiment of the Invention: Applicant explains that new claims 43-46 are novel with respect to Skelton in that, as but one reason, these claims are limited to structures that include outer tension member attachments that define an outer enclosing surface that has only polygonal faces, and inner tension member attachments that are disposed within this outer enclosing surface. Skelton simply does not disclose, teach or suggest such an arrangement of tension members and/or attachments. Indeed, Skelton discloses all guy-to-strut connections on the periphery. New claims 43-46 should not generate a §102 concern that is based on Skelton.

7. The Examiner has expressed concern as to claims 1, 3, 4, 6, 7, 9 and 11 under 35 USC § 103(a) as based on the Skelton reference alone.

A. The Examiner Has Not Established a Prima Facie Case of Obviousness: In response, the Examiner first submits that the Office has not established a *prima facie* case of obviousness. Indeed, “[T]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness.” MPEP 2142. The MPEP goes on to state that “To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.” MPEP 2143, Basic Requirements of a *Prima Facie* Case of Obviousness. Applicant submits that these three criteria have not been met with respect to the Skelton reference and explains his position as follows:

The Prior Art Reference Does Not Teach or Suggest All Claim Limitations: As explained above in Applicant’s response to the §102 concerns, Skelton does not disclose, teach or suggest all claim limitations. Applicant hereby incorporates the explanation presented above as to the Examiner’s §102 concerns.

There is No Suggestion or Motivation to Modify the Reference: There is no suggestion or motivation, either in Skelton itself or in knowledge generally available to one of ordinary skill in the art, to modify Skelton to arrive at any of the instant application's new claims. Simply, the Office has not pointed to any evidence of such motivation or suggestion to modify Skelton so as to arrive at the inventive subject matter as described by the new claims. Applicant incorporates the above text presented in response to the §102 concerns in which Applicant presents at least one novel feature of each of the instant application's new claims with respect to Skelton, and submits that there is simply no motivation or suggestion to change Skelton so as to include these novel features in order to arrive at the instant application's new claims. Relevantly, "[A]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Further, the mere fact that references can be combined or modified (although Applicant certainly does not concede that such is the case), does not render the resultant combination (or, presumably, modification) obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Indeed, "[T]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). Each of the elements is addressed separately in the discussion on *In re Japikse* presented below, but in general, unsupported assertions of what those skilled in the art might have done do not provide a level of support which meets the Office's burden of proof. Of course, those skilled in the art *could* have tried to accomplish much had they had the knowledge and perspectives of the present inventor. With the hindsight of these perspectives, they might have even tried to achieve the present invention -- but as the art of record poignantly shows, they did not.

To a large degree, the Skelton reference cited actually shows the exact opposite -- that the understanding of those skilled in the art at the time the invention was made did not include the perspective which the present inventor had. To say that those of ordinary skill could have achieved the various claimed elements is simply unsupported. Of course, once traversed, it is improper to maintain an unsupported allegation. As the courts have long stated:

“[W]e reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice. If evidence of the knowledge possessed by those skilled in the art is to be properly considered, it must be timely injected into the proceedings”

In re Eynde, 480 F.2d 1364 (CCPA 1973).

Examiners are even cautioned in their training materials against basing rejections on allegations of their personal impressions as to what might be a design choice -- essentially their personal impressions as to what might be obvious. To maintain such allegations, *evidence is necessary*. Of course, the applicant has traversed the allegations (see also the discussion below) and -- to the extent not now mooted by the response -- requests evidence to support each of the propositions proposed. Further, while several specific allegations are addressed below, this request should be understood to apply to each of the unsupported allegations raised in the action.

There is no Reasonable Expectation of Success of the Inventive Subject Matter: Simply, the Office has not set forth any evidence suggesting the modification would be successful.

B. The In re Japikse Holding Is Not Properly Applicable to the Instant Application: The Examiner has based his concerns on law expressed in In re Japikse, 86 USPQ 70. In response, Applicant first notes that MPEP 2144.04. VI. C summarizes the Japikse case as follows: “Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.”

Although acknowledging that a variety of elements were not disclosed in Skelton, the action expressed concern under § 103 that some of those admittedly undisclosed elements might simply be obvious to a person of ordinary skill in the art at the time the invention was made. As to the modification of elements presented, the applicant respectfully disagrees that they would have been obvious.

Applicant submits that the Japikse case does not set forth proper legal grounds for rejecting claims of the instant application as obvious for the following reasons:

1. The Japikse holding is not properly applicable to the facts in the instant application because Japikse involved claims that were new with respect to the prior art merely in a shifting of the position of the starting switch and the claims of the instant application involve a significantly more substantial advance in the relevant technology than simply changing the position of a switch. Indeed, and as but a few examples, certain of the claims of the instant application involve arrangement of compression members onto the surfaces of shapes onto which no one has heretofore arranged compression members (such as, e.g., onto the surfaces of hyperbolic paraboloids). Certain of the claims of the instant application also involve arrangement of the tension members in novel radial or internal configurations. Certain of the claims involve reducing the number of compression members and/or the planes on which these compression members are situated. Certain of these claims involve novel structures having inner compression member-to-tension member attachments that are situated within outer compression member-to-tension member attachments that form polygonal faces, as well as novel structures having compression members that have ends that contact at a common spatial point and radiate outwardly therefrom. Applicant submits that each these novel aspects of the claims of the instant application are more significant and substantial than simply moving the fixed position of a starting switch – the one novel aspect of the claims on appeal in the case upon which the Office bases its §103 rejection of the application's instant claims.

2. The Japikse holding is not properly applicable to the facts in the instant application because Japikse involved claims whose novel feature (a new position of the start switch) did not

modify the operation of the device. As indicated as follows, each of the independent claims of the instant application (and the claims that depend from them) modify the operation of the Skelton structure on which the Office bases its §103 rejection. Additionally, Applicant points out that the Applicant's use of the term "modify the operation of Skelton" is not to be construed as an admission that the indicated difference is the only way that the specified claims are different from Skelton, but instead the manner of the presentation of the following explanation is to facilitate the Examiner's understanding of Applicant's explanation. Further, the abbreviated description of the claims is not to be construed as limiting them in any manner, as of course that is left to the claims themselves. Specifically:

a) One way that claims 15 –28 of the instant application (claims with compression members situated on a hyperboloid surface) modify the operation of Skelton is by facilitating creation of composite structures generated by horizontal expansion (horizontal according to Fig. 2A-2D) and by facilitating the creation of composite structures exhibiting a more geometrically compatible arrangement.

b) One way that Claims 20-23, 29 and 47 (claims with some tension members arranged in a radial configuration) modify the operation of Skelton is by reducing the overall length of guys that, in Skelton, are arranged in a manner other than radial. Additionally, a radial tension member configuration will reduce the number of tension member attachments at at least one of the compression member ends, resulting in a more simplified, more easily manufactured, and possibly a less expensive structure. Further, an improvement in structural integrity, particularly in structural response to an applied force, is realized with the radial tension member configuration, as compared with the configuration of Skelton's tendons. More specifically, when an overall tensile force is applied to a structure having a radial arrangement of tension members, and that tensile force is applied in a plane that is substantially parallel to the plane in which the radial arrangement of tension members is situated (e.g., an end plane), the structure's design causes a more effective resistance to the force than is observed with the manner of guying exhibited in Skelton, resulting in less deformation per given tensile load than is observed in Skelton, and an increase in the reactive tensile

stresses in a radial configuration that is approximately one-half of the increase observed in Skelton. One additional modification of operation of Skelton that is attributable to the radial tension member configuration of claims 20-23, 29 and 47 of the instant application is manifested upon the creation of composite structures from individual unit structures that have radial tension member configurations in the upper and/or lower end planes (when the composite structure is, e.g., a slab, and is created by, e.g., attaching several of the structure shown in Fig. 2A of the instant application adjacent one another, so that use of the terms upper/lower end planes is proper). When contiguous individual unit structures all have radial tension member configurations in either the upper and/or lower end planes (i.e., all units have radial tension member configurations in the upper plane, or all units have radial tension member configurations in the lower planes, or all units have radial tension member configurations in the upper and lower planes), a network of “continuous” tension members running parallel to each other in each of three separate directions is observed. This arrangement has significant strength benefits as compared with structures such as Skelton that do not disclose radial tension member configurations. In these ways, a functional and operational improvement in strength per weight and strength per unit cost is observed.

c) One way that Claims 24-28, 30 and 48 (claims with some tension members arranged in an internal configuration) modify the operation of Skelton is by allowing a directing of tension members along pathways that simply is not possible with Skelton and its configuration of tendons. This enablement afforded by the internal tension member configuration of the indicated claims of the instant application allows the avoidance of obstructions and/or the achievement of other design goals such as preferred tension member attachments points. Additionally, internal tension member configuration will reduce the number of tension member attachments at at least one of the compression member ends, resulting in a more simplified, more easily manufactured, and possibly, a less expensive structure. Further, an improvement in structural integrity, particularly in structural response to an applied force, is realized with the internal tension member configuration as compared with the configuration of Skelton’s tendons. More specifically, when an overall tensile force is applied to a structure having an internal arrangement of tension members that is attached to compression members such that points of attachment are in, e.g., one end plane, and that tensile force

is applied in a plane that is substantially parallel to that end plane, the structure's design causes a more effective resistance to the applied force than is observed with the manner of guying exhibited in Skelton, resulting in less deformation per given tensile load than is observed in Skelton, and an increase in the reactive tensile stresses of the internal configuration that is approximately one-half of the increase observed in Skelton. One additional modification of operation of Skelton that is attributable to the internal tension member configuration of claims 24-28, 30 and 48 of the instant application is manifested upon the creation of composite structures from individual unit structures that have internal tension member configurations in the upper and/or lower end planes (when the composite structure is, e.g., a slab, and is created by, e.g., attaching several of the structure shown in Fig. 2B of the instant application adjacent one another, so that such upper/lower end plane nomination is proper). When contiguous individual unit structures all have internal tension member configurations in either the upper and/or lower end planes (i.e., contiguous units have internal tension member configurations in the upper plane, or contiguous units have internal tension member configurations in the lower planes, or contiguous units have internal tension member configurations in the upper and lower planes), a network of "continuous" tension members running parallel (when viewed from above, e.g.) to each other in each of three separate directions is observed, although, as different from the composite slab structures having a radial tension member configuration, the composite structures having internal tension member configurations in the upper and/or lower end planes might have a W profile (instead of a ----- profile that would likely be observed with the slabs having radially tensioned end planes). This arrangement has significant strength benefits as compared with structures such as Skelton that do not disclose internal tension member configurations. Importantly, each of these functionalities and operational improvements are realized without compromising the integrity or strength of the structure, and indeed in many cases, result in an increase in the strength and integrity of the structure. Simply, and as explained, the "non-internal" tendon configuration of Skelton simply does not allow or provide for the operational capabilities afforded by an internal tension member configuration.

d) One way that Claims 31-34 (claims with at least four compression members that lie on the surfaces of two different intersecting planes) modify the operation of Skelton is by

reducing the possible number of planes on which Skelton's struts are situated, thereby providing the perhaps unexpected result of the possibility of the creation of a curved (such as along at least a portion of a sphere) composite structure such as an arch.

e) One way that Claims 35-38 (claims with compression members arranged on the surfaces of two hyperbolic paraboloids) modify the operation of Skelton is the provision of new stand-alone structures that, either alone or as part of a composite structure, can operate to meet structural needs that cannot be by Skelton.

f) One way that Claims 39-42 (claims with compression members that have ends that contact at a common spatial point and radiate outwardly therefrom) modify the operation of Skelton is by improving structural integrity and strength. One way this strengthening is achieved is through an ability to more effectively recruit tension members in response to an applied external force. Additionally, under an applied external force, Skelton would be much more likely to deform than would the radial compression member configuration of the instant application. Indeed, it appears that elastic tension members of the Skelton structure, in addition to its sensor(s) and articulator(s) are used to facilitate such deformation. However, external forces (within reason of course) that will deform Skelton's structure will not necessarily deform the radial compression member configuration of the instant application's structure. These are just a few ways in which the structure of claims 39-42 modify the operation of Skelton.

g) One way that claims 43-46 (claims having inner compression member-to-tension member attachments that are situated within outer compression member-to-tension member attachments that form polygonal faces) modify the operation of Skelton is by improving structural integrity and strength by providing a structure that has the ability to more effectively recruit tension members in response to an applied external force for a structure requiring a polygonal arrangement of compression members.

In general summary, there simply is no adequate support for an assertion that the claims would have been obvious to a person of ordinary skill in the art and in fact they would not have been so obvious. It is believed that the above is adequate to efficiently show that the initial concern was not correct. However, should additional proof be desired (whether to this or any other remarks in this response) the applicant could supply it and requests a simple telephone call to supplement this response if necessary.

The amendments as submitted in Exhibits A and B should be understood to be made as a practicality only, and should not to be construed as creating any situation of file wrapper estoppel or the like as all rights are expressly reserved and may be pursued in this or other applications, such as divisionals, continuations, or continuations-in-part if desired. Relatedly, it should be understood that the amendments made herein are made for tangential issues of clarity and as a matter of the Office's convenience or expedience only. The amendments should not be interpreted as an action that in any way surrenders a particular equivalency, surrenders any patent coverage, surrenders any right to patent coverage, restricts the scope of protection intended, or otherwise limits any rights which the applicant may now or hereafter assert. It should be understood that, unless and to the extent deemed broadened by this amendment, and even as amended, the applicant expressly reserves all rights, including but not limited to: all rights to maintain the scope of literal coverage with respect to any element as may have existed under the language previously presented, all rights to maintain the scope of equivalency coverage as may have existed under the language previously presented, and all rights to re-present the prior language at any time in this or any subsequent application. To the extent currently foreseeable, no change or reduction in direct or equivalency coverage is believed to exist, and no change or reduction in direct or equivalency coverage is intended through the presentation of this amendment.

CONCLUSION

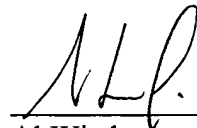
In an August 2, 2002 office action communication, the Office raised various concerns as to formality matters such as claim numbering and spelling, and more substantive concerns under

35 USC §102 and §103 as based on US Pat. No. 5,642,590 to Skelton. The Applicant submits this amendment and request for reconsideration to fully address the Office's August 2, 2002 action. The Applicant submits this amendment and request for reconsideration in part to fully address the Office's action. Please amend the above identified application according to attached Exhibits A and B. The Applicant believes all concerns have been addressed and that all claims remaining in the case – new claims 15-55 – are in condition for allowance. Reconsideration and allowance of these remaining claims is respectfully requested at the Examiner's earliest convenience. Finally, should the Examiner have any remaining questions or disagree with any of applicant's explanations, it is requested that the Examiner contact the undersigned by telephone in order to expedite the processing of this application.

Dated this 2nd day of December, 2002.

Respectfully submitted,

SANTANGELO LAW OFFICES, P.C.



Al Wiedmann Jr.
ATTORNEY FOR APPLICANT
PTO No. 48,033
125 South Howes, Third Floor
Fort Collins, CO 80521
(970) 224-3100